

# Roads to Respect 2010, Students Final Report



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## ATTACHMENTS

- *letter of support from Toyota*
- *letter of support from voluntary association "Auser"*
- *questionnaire (Italian version)*
- *estimation of costs – pedestrian crossing in Via Alberto Sordi*
- *estimation of costs – pedestrian crossing in Viale Caravaggio*
- *approved solution drawing (two pedestrian crossings)*

## **1-DEFINITION OF THE HIGH RISK SITE**

### **1.1 – INTRODUCTION**

The high risk site selected is an old urban roundabout in my city, Grosseto.

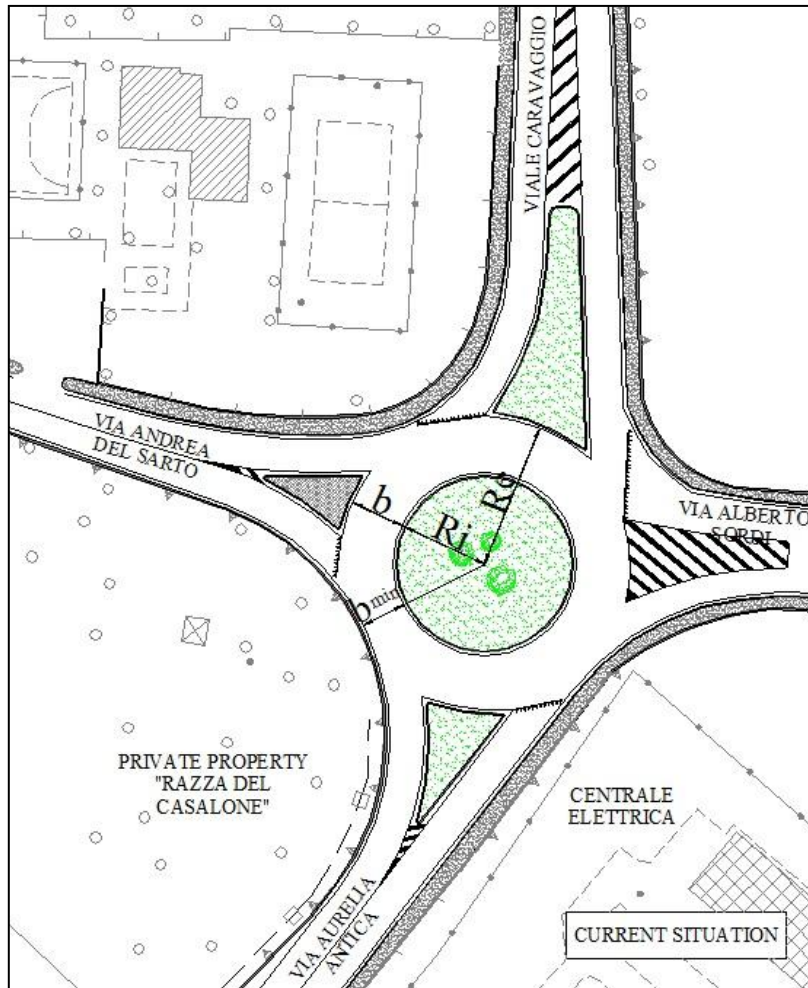
Grosseto is a little town, with about 82.000 residents, situated in the middle part of Italy, in the south of Tuscany. Because of the closeness of the sea, which is 15 km distant, it is a centre of attraction for tourists during summer months.

This roundabout is located in a suburban area, in the intersection of four roads: Via Aurelia Antica, Via Alberto Sordi, Viale Caravaggio and Via Andrea Del Sarto. It is included in a commercial area, recently extended in consequence of the shopping centre “Aurelia Antica” opening, and a new residential area called “Casalone”.



**1.2 – CURRENT GEOMETRICAL CHARACTERISTICS**

The drawing with the current geometrical characteristics is reported further on:



- inner radius:  $R_i = 13,00$  m
- outer radius:  $R_e = 22,00$  m
- circulatory roadway width:  $b = 9,00$  m
- circulatory roadway width next to the racecourse:  $b_{min} = 7,00$  m
- entry width:  $5,10 \div 5,40$  m, but  $9,30$  m in Via Alberto Sordi
- exit width:  $4,80 \div 5,20$  m, but  $7,70$  m in Viale Caravaggio
- entry radius: the following table shows the entry radius of each leg:

LEG 1 – Via Aurelia Antica	$R_1 = \infty$
LEG 2 – Via Alberto Sordi	$R_2 = 23,00$ m
LEG 3 – Viale Caravaggio	$R_3 = 23,00$ m
LEG 4 – Via Andrea Del Sarto	$R_4 = 37,00$ m

- exit radius: the following table shows the exit radius of each leg:

LEG 1 – Via Aurelia Antica	$R_1 = 37,00$ m
LEG 2 – Via Alberto Sordi	$R_2 = 38,00$ m
LEG 3 – Viale Caravaggio	$R_3 = 23,00$ m
LEG 4 – Via Andrea Del Sarto	$R_4 = 23,00$ m

### **1.3- THE CONTEXT**

#### **Via Aurelia Antica**



Via Aurelia Antica is a straight road, about 10,00 m wide; the parking is forbidden on both sides.

Looking in the roundabout direction, there is not the sidewalk on the left side, where the racecourse “Ippodromo del Casalone” is located. On the right side there are the post office, residential and commercial areas, including the shopping centre “Aurelia Antica”.

Moreover, Via Aurelia Antica is the main road to the seaside village “Principina a Mare”, where there are a lot of tourists during the summer months.

#### **Via Alberto Sordi**

Via Alberto Sordi is the only road to the new residential area “Casalone”. It is about 13,00 m wide, with a central traffic island which doesn’t continue up to the roundabout; so the splitter island is just painted on the pavement. Because of the big lane width, the road is driven along with high speed, about 70 km/h.





### **Viale Caravaggio**



Viale Caravaggio is the main road to the city centre. Its width changes from the roundabout, where is 15,00 m, to the end of the road after 230 m, where is 9,00 m. Looking in the roundabout direction, on the right side there is the district called “quartiere Gorarella”, which is one of the biggest residential areas of Grosseto.

### **Via Andrea Del Sarto**

Via Andrea Del Sarto is one of the roads to the seaside village “Marina di Grosseto”. It is a long straight road, more than 1 km, and about 8,00 m wide. Looking in the roundabout direction, on the left side there is the district Gorarella and a little sporting centre, while on the right side there is the racecourse private property; moreover, on this side there is not the sidewalk.

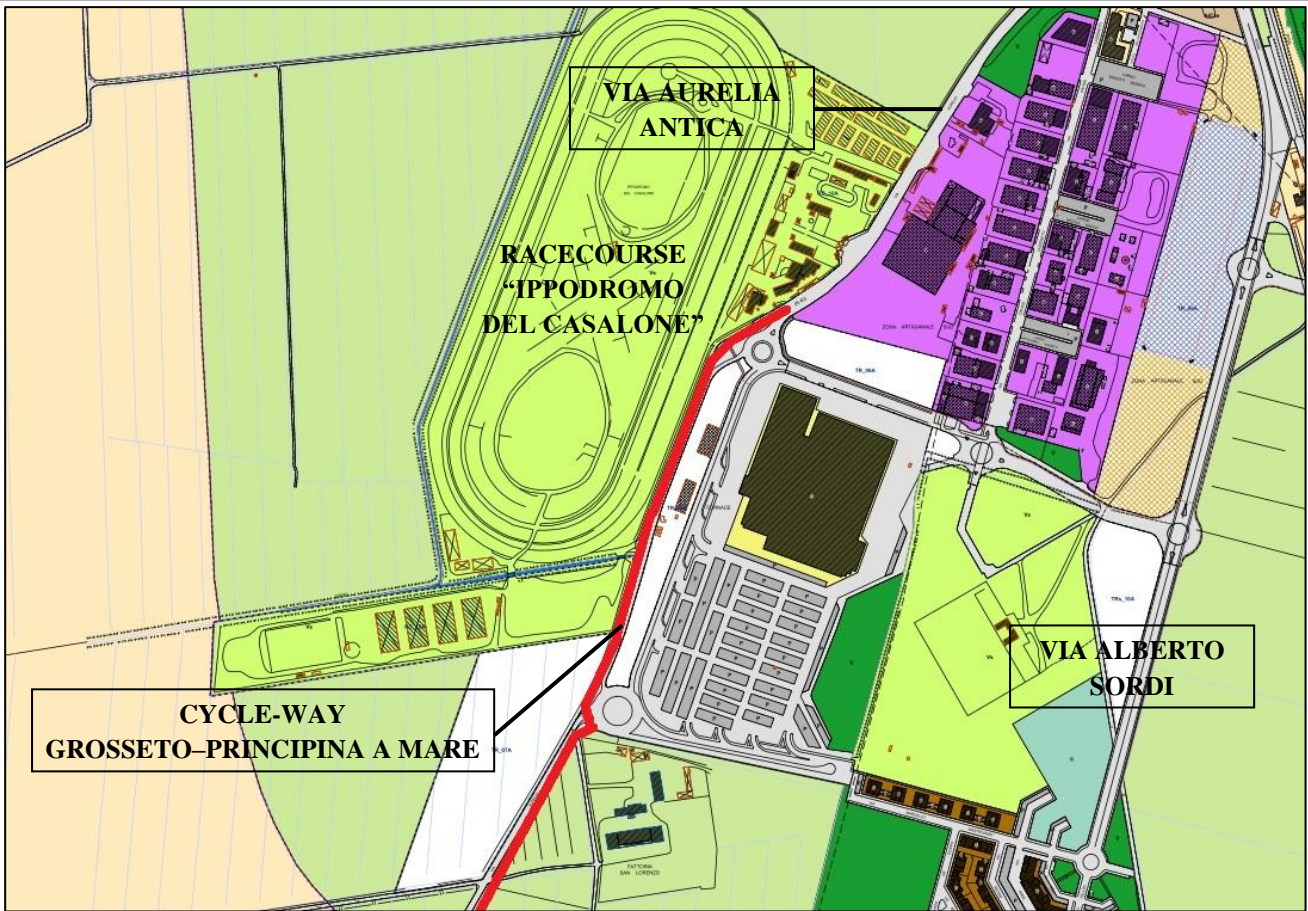


## **1.4 – THE TOWN PLANNING**

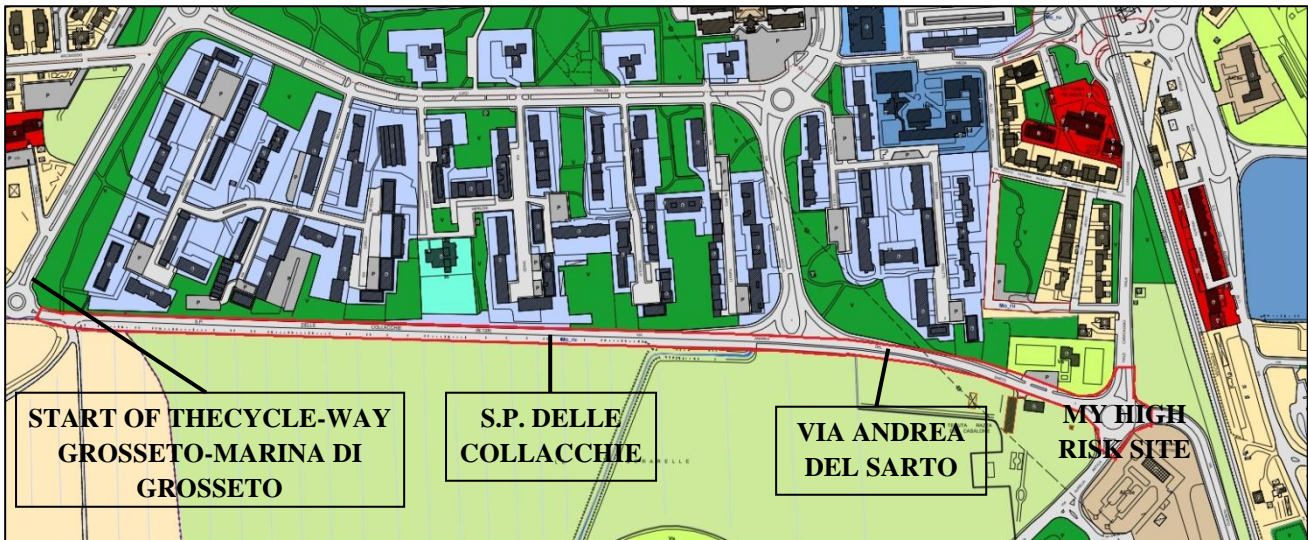
In March 2011 was approved the Town Planning, which concerns also the intersection area under discussion.

First, it is planned to build a cycle-way which connects Grosseto with Principina a Mare. This cycle-way starts about 450 m to the south of the roundabout, at the entrance of the racecourse. A part of the Town Planning – TAV.22 is reported further on, where the planned cycle-way is indicated with the red line (the high risk roundabout is not included in this drawing because it is to the north of it):





Secondly, it is planned to widen Via Andrea Del Sarto and S.P. delle Collacchie. At the beginning, this intervention did not include the roundabout under discussion, except a little part of it next to Via Andrea Del Sarto. During my R2R campaign I proposed to include in this intervention also the roundabout area, in order to realize an outside cycle and pedestrian path. As it is possible to see in chapter 3 and chapter 4, this proposal was accepted and the planned intervention in Via Andrea Del Sarto includes the roundabout area. A part of the Town Planning – TAV.20 is reported further on, where the interested area is indicated with the red line:



### **1.5 – TRAFFIC DATA**

This roundabout is one of the “gates” to the sea; for this reason, during the summer months there is a big car traffic volume, especially between Via Aurelia Antica and Viale Caravaggio. There are also a lot of lorries, because in the country between Grosseto and the seaside villages there are many farms. Moreover, we can find also cycles and motorcycles, during all the year.

As regards traffic volume, I obtained it by myself, materially counting vehicles which crossed the roundabout. It was done on Tuesday, the 12<sup>th</sup> of April 2011; the peak hour is from 10 a.m. to 11 a.m.

The following table shows the result of the vehicles count:

TYPOLOGY OF VEHICLES	VIA AURELIA ANTICA veh/h (1)		VIA ALBERTO SORDI veh/h (2)		VIALE CARAVAGGIO veh/h (3)		VIA ANDREA DEL SARTO veh/h (4)	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
cycle	2	10	4	2	6	6	6	0
motorcycle	4	8	2	2	8	2	2	4
light vehicle	340	248	84	86	330	442	256	234
heavy vehicle	10	22	8	6	40	20	20	30

These are the coefficients of equivalence:

- 1 cycle = 0,5 vhp
- 1 motorcycle = 0,5 vhp
- 1 light vehicle (cars and light commercial vehicles) = 1 vhp
- 1 heavy vehicle (busses and heavy commercial vehicles) = 2 vhp

The following table shows traffic volumes (in vhp/h) of each leg:

VIA AURELIA ANTICA vhp/h (1)		VIA ALBERTO SORDI vhp/h (2)		VIALE CARAVAGGIO vhp/h (3)		VIA ANDREA DEL SARTO vhp/h (4)	
IN	OUT	IN	OUT	IN	OUT	IN	OUT
363	301	103	100	417	486	300	296

It is important to underline that from June to August, when schools are closed, there is a peak time band between 17:30 and 19 on Saturdays and Sundays, because of people who came back from the seaside; in Via Aurelia Antica, often there are more than 500 m of cars standing in line; the same



situation is in Viale Caravaggio. During the remaining part of the day, the lorries flow is relevant, because farms located in the country work especially during summer months;

Moreover, there is a high traffic volume in the time band 20-21 and 23:30-24 during summer horse races days, which are Wednesday and Saturday; in fact, because of the racecourse in Via Aurelia Antica near my high risk site, a lot of people go there by car.

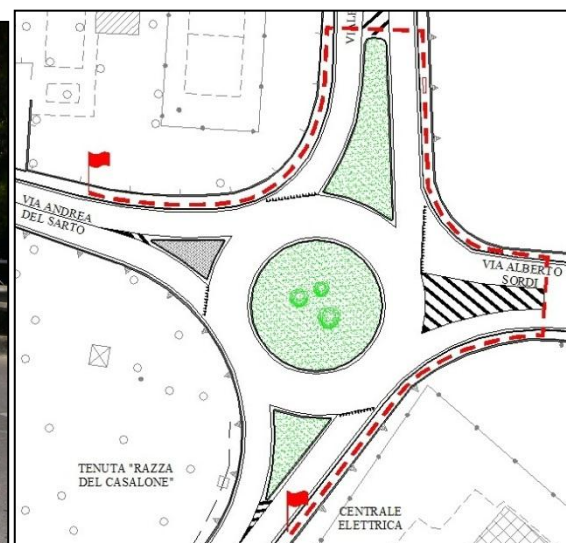
### **1.6 – THE SITE SAFETY RISKS**

Grosseto is, fortunately, a small city surrounded by the countryside; after the city border, there are only fields, and we can't find villages for 15 km; so, the economic system is mostly based on tourism and agriculture.

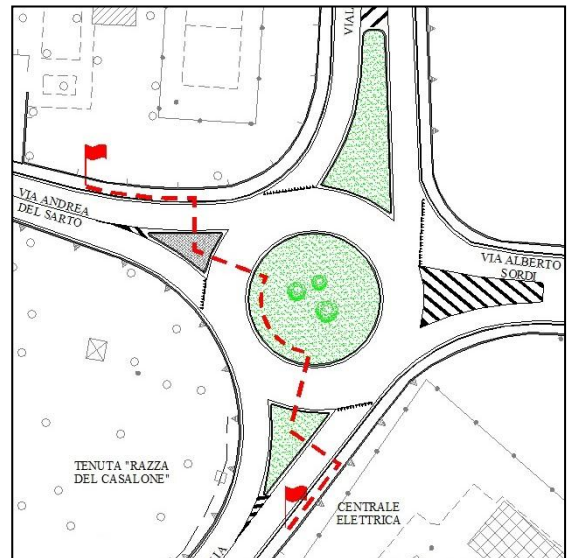
This situation is fantastic for the environment, but people mind is restricted to the idea that beyond the city centre there is nothing. So, despite the new residential area “Casalone”, and even if the border road sign “Grosseto” is far from the roundabout I am analyzing, people who live in the city centre think that this site is “abroad”, including local government. So, sidewalks and pedestrian crossings are like an optional here.

In order to understand the roundabout unsafe condition, and why I chose this site, I am going to explain the safety risks that we find there:

- there is not the sidewalk on the left side of Via Aurelia Antica (where the post office has been recently moved), on the right side of Via Andrea Del Sarto, and between these two roads outside the circulatory roadway; so pedestrians who want to move between these roads would have to walk around the roundabout for 270°.



Actually, nobody walk around the roundabout, but everybody cross into the circulatory roadway walking among cars:



- the second big problem is represented by pedestrian crossings: they are completely absent on all of the four roads, not only near the roundabout but in all the area. So, even if a pedestrian decides to walk around the roundabout, in any case he will not find a zebra crossing. This problem is even more critical for wheelchair-users, who can not cross without a ramp on the sidewalk.

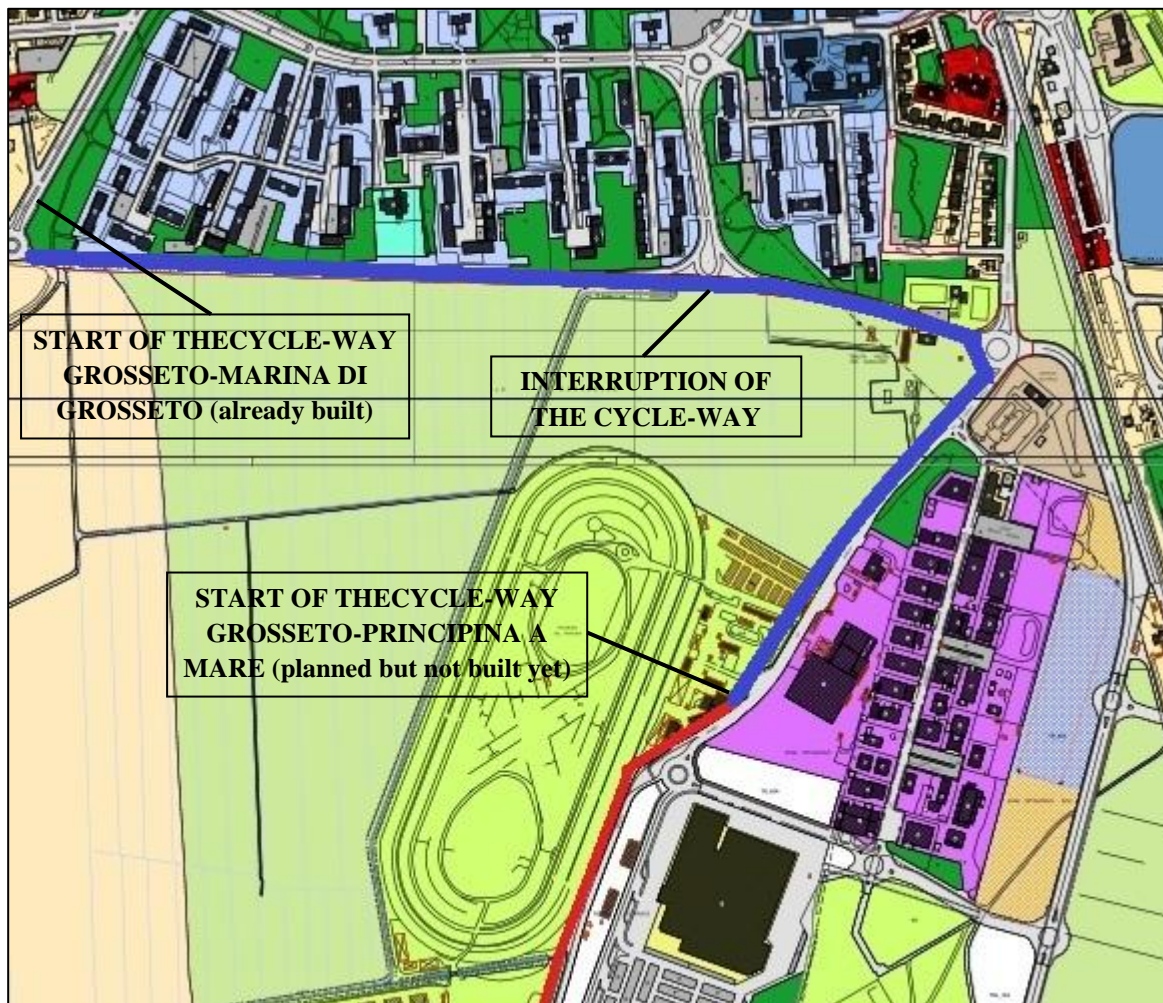
As I have said shortly before, the only post office situated in district Gorarella had been moved to Via Aurelia Antica some years ago, so people need to go there. This problem is strongly felt from old people who live in district Gorarella; in fact, I spoke with Rolando Boni, president of the senior center “I Saggi”, and he told me that he tried a lot to convince public administration to build the sidewalk, but nobody did it because it is considered of minor importance. Since old people are afraid of crossing the roundabout because they don’t know where to cross it, the president Rolando Boni and the association Auser organize car turns to take these old people to the post office, even if there are only 500 m.

- the third problem concerns the two cycle-ways: the first one, which was built some years ago, connects Grosseto with Marina di Grosseto, and it starts about 1 km to the west of the roundabout under discussion (see page 5). The second one connects Grosseto with Principina a Mare, starting about 450 m to the south of the roundabout (see page 4 and 5); it has not been built yet but it has already been designed by Ing. Liciano Lotti and planned in the Town Planning. Moreover, there is already the cycle-way between Marina di Grosseto and Principina a Mare.

In conclusion, there will be a cycle ring Grosseto – Marina di Grosseto – Principina a Mare – Grosseto, but it will be interrupted round the roundabout under discussion for about 1450 m.



The following drawing shows the situation, where the interruption between the cycle-way Grosseto – Marina di Grosseto and the cycle-way Grosseto – Principina a Mare is indicated with the blue line:



- the last problem is that there is not deflection for vehicles coming from Via Aurelia Antica, because the entry path radius is too high. In fact, here the approach alignment is offset to the right of the roundabout's center point, bringing the approach in at a more tangential angle. So the entry radius is to infinity and the entry path radius is 113 m.

**1.7 – ACCIDENTS ALREADY OCCURRED**

The following table includes accidents already occurred since 2006:

DATE	TIME	INVOLVED VEHICLES	LOCATION	REASON OF ACCIDENT	INJURED
1/8/2006	20:20	1 car 1 motorcycle	Caravaggio – Del Sarto	failure to safety distance (the approaching car ran into the stopped motorcycle waiting for entrance into the roundabout)	motorcyclist (with 15 prognosis days)
3/7/2007	11:30	1 car 1 bicycle	Caravaggio – Del Sarto	the car at the entrance didn't give way to bicycle in the roundabout	cyclist (with 10 prognosis days)
29/11/2008	7:50	2 lorries	Caravaggio – Del Sarto	failure to safety distance at the entrance of the roundabout (because of a pedestrian in the middle of the road)	//
23/4/2009	20:30	2 cars	Aurelia - Del Sarto	the car at the entrance didn't give way to car in the roundabout	driver (with 5 prognosis days) passenger (with 30 prognosis days)
30/6/2009	9:15	1 lorry	Aurelia - Del Sarto	collision with a fixed obstacle (a tree branch on the road side)	//
13/1/2010	7:40	1 lorry 1 bicycle	Caravaggio – Del Sarto	the lorry which was going out of the roundabout didn't look at bicycle on its right	cyclist: fatal injury
5/6/2010	16:15	2 cars	Caravaggio – Del Sarto	the car at the entrance didn't give way to car in the roundabout	//

There were seven accidents between 2006 and 2010: main cause is that people do not give way, even because the roundabout does not induce to reduce speed. Two of these accidents involved cyclists, and one of these was a fatal injury.

This problem will increase when the cycle-way Grosseto – Principina a Mare will be built, because the cycle volume will be high.



## **2-PROJECT PROPOSALS TO TREAT THE SELECTED HIGH RISK SITE**

### **2.1 – FIRST SOLUTION: CYCLIST AND PEDESTRIAN PATH**

In the first solution I considered that there are some planned intervention in Via Andrea Del Sarto and S.P. delle Collacchie, as I explained in chapter 1. They consist in widening these roads and the roundabout section between Via Andrea Del Sarto and Viale Caravaggio (see pag.5); in the drawing on the next page, they are represented with the blue line.

This is the only thing I could have from the technical office, because these interventions are planned but they still have to be designed correctly by the technical office designers. Since they are drawn approximately, and the new roads would be too large, I used the blue line just like a border, and I did not follow it at all.

According to these planned interventions, I can modify all the roundabout, realizing the outside cycle path and correcting the deflection for vehicles coming from Via Aurelia Antica.

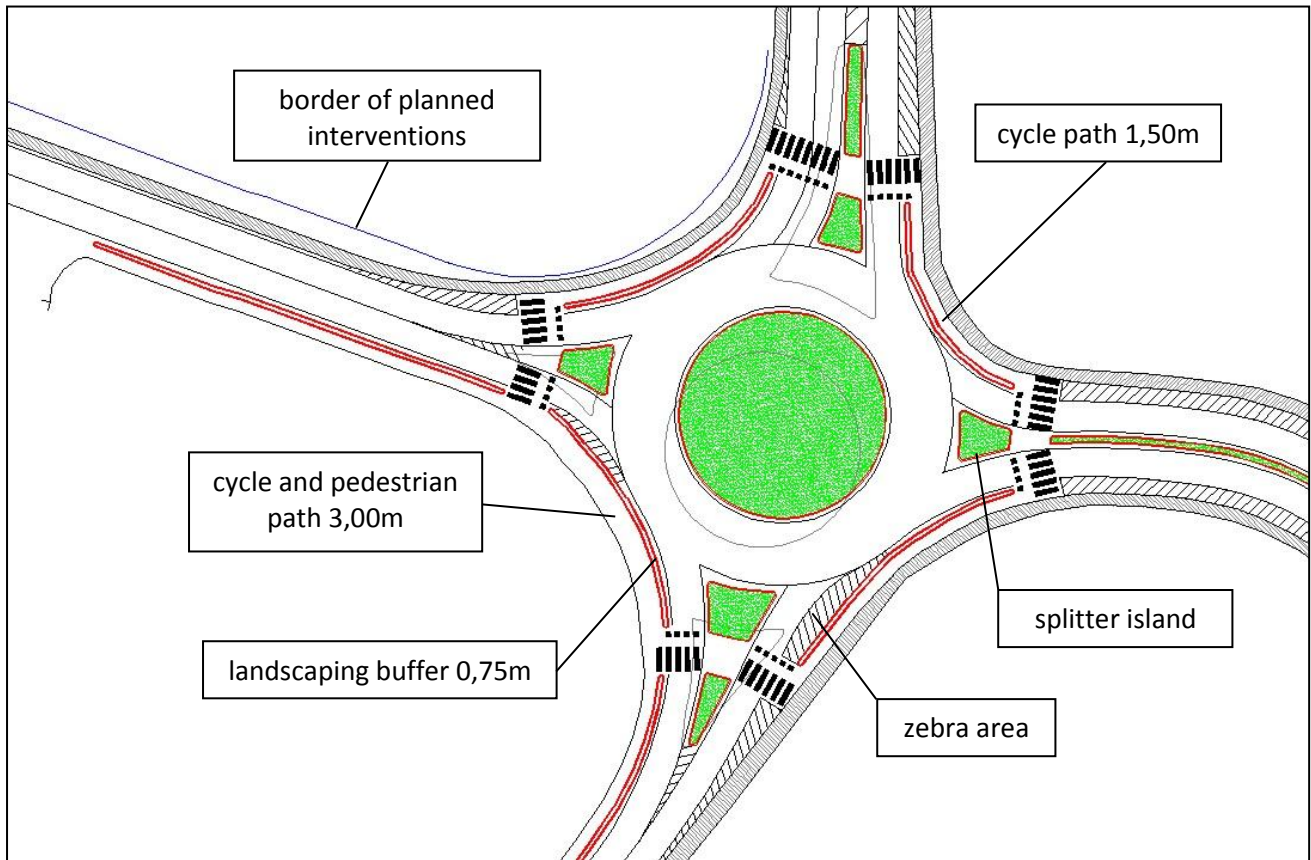
- I designed the cycle path outside the roundabout, which is 1,50 m wide; it becomes a cycle and pedestrian path between Via Andrea Del Sarto and Via Aurelia Antica, where currently there is not the sidewalk, and it is 3,00 m wide.

Both of this paths are at road level and separated from vehicles by a landscaping buffer 75 cm wide, which is represented with the red line in the drawing on the next page.

- The cycle and pedestrian path connects the cycle-way Grosseto – Marina di Grosseto with the planned cycle-way Grosseto – Principina a Mare, eliminating the interruption I described in chapter 1 on page 8.
- It is possible to avoid the tangential approach alignment for vehicles coming from Via Aurelia Antica, in order to correct their deflection, by modifying the splitter island of this road and realizing at least a zebra area to the right of the entry; with an higher budget, it would be better to rebuild this part, widening the sidewalk, in order to avoid the crossing of the zebra area.
- In Via Alberto Sordi I designed the splitter island, which is currently absent, connecting it with the existing traffic island.
- In order to realize all of the previous interventions, it is necessary to rebuild the central island and the splitter islands.

It is important to say that this solution do not expropriate the racecourse private property near the roundabout; there are expropriations in Via Andrea Del Sarto and S.P. delle Collacchie planned by the technical office designers, not by me.

In the drawing below, the current situation is represented with the grey line, while the interventions I designed are represented with the red line:



These are the modified geometrical characteristics:

- inner radius:  $R_i = 13,30$  m
- outer radius:  $R_e = 22,30$  m
- circulatory roadway width:  $b = 9,00$  m (8,00 m between road marking)
- hard shoulder: 0,50 m
- entry width: 4,00 m between road marking
- exit width: 4,50 m between road marking
- entry radius: the following table shows the entry radius of each leg:

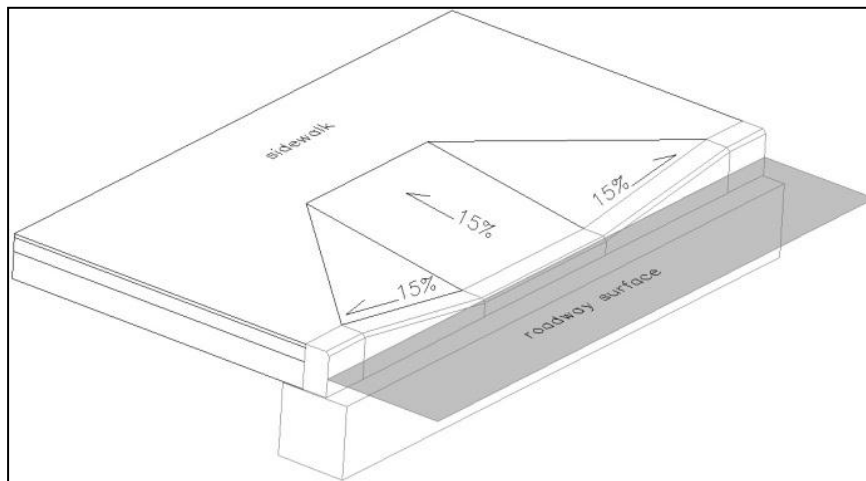
LEG 1 – Via Aurelia Antica	$R_1 = 20,00$ m
LEG 2 – Via Alberto Sordi	$R_2 = 20,00$ m
LEG 3 – Viale Caravaggio	$R_3 = 20,00$ m
LEG 4 – Via Andrea Del Sarto	$R_4 = 20,00$ m

- exit radius: the following table shows the exit radius of each leg:

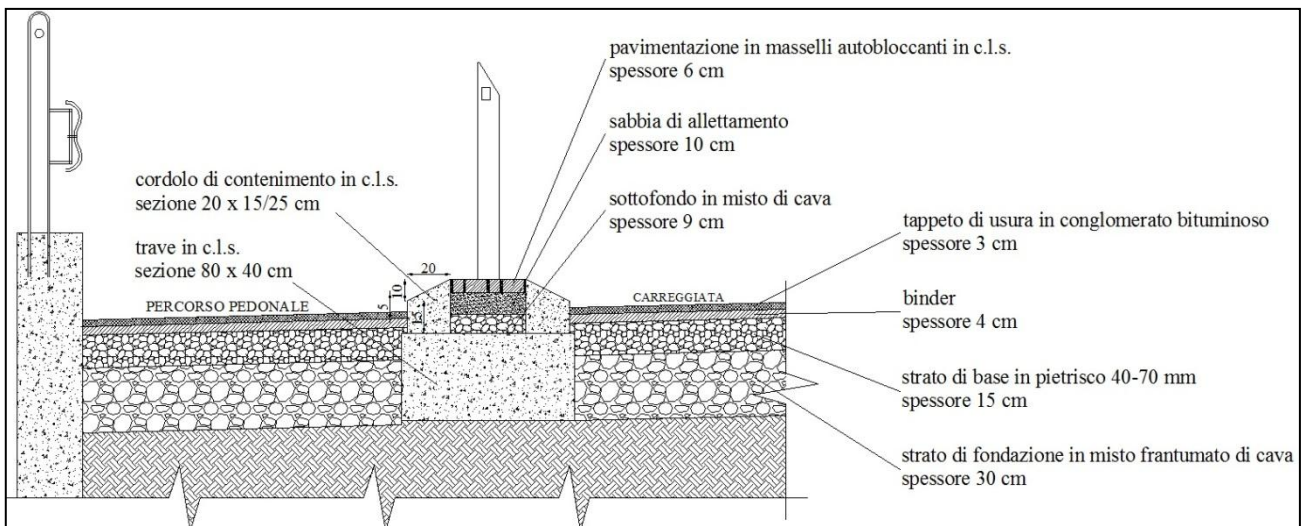
LEG 1 – Via Aurelia Antica	$R_1 = 30,00$ m
LEG 2 – Via Alberto Sordi	$R_2 = 40,00$ m
LEG 3 – Viale Caravaggio	$R_3 = 20,00$ m
LEG 4 – Via Andrea Del Sarto	$R_4 = 40,00$ m

- cycle path width: 1,50 m + 0,75 m of landscaping buffer
- cycle and pedestrian path width: 3,00 m + 0,75 m of landscaping buffer
- pedestrian crossings width: 2,50 m
- curb height at pedestrian crossings: 2,00 cm

Obviously, I paid even more attention to wheelchair-users, including ramps on the sidewalk where I designed the pedestrian crossings. The following illustration shows the ramp detail drawing:



Moreover, the second illustration shows the landscaping buffer detail drawing:



These are the benefits we can have with this solution:

- ✓ no expropriation, because my intervention does not concern the racecourse property;
- ✓ safer situation for pedestrians by pedestrian crossings and path;
- ✓ handicapped accessible infrastructure, by curbs with an optimum height where there is the pedestrian crossing;
- ✓ improved deflection for vehicles which come from Via Aurelia Antica, by rebuilding the splitter island and painting a zebra area;
- ✓ increased safety for cyclists with the cycle-way.

The problems of this solution is that it is necessary to rebuild most of the roundabout parts, so costs are high: about 150.000 €.

### **2.2 – SECOND SOLUTION: ONLY PEDESTRIAN PATH AND PEDESTRIAN CROSSINGS**

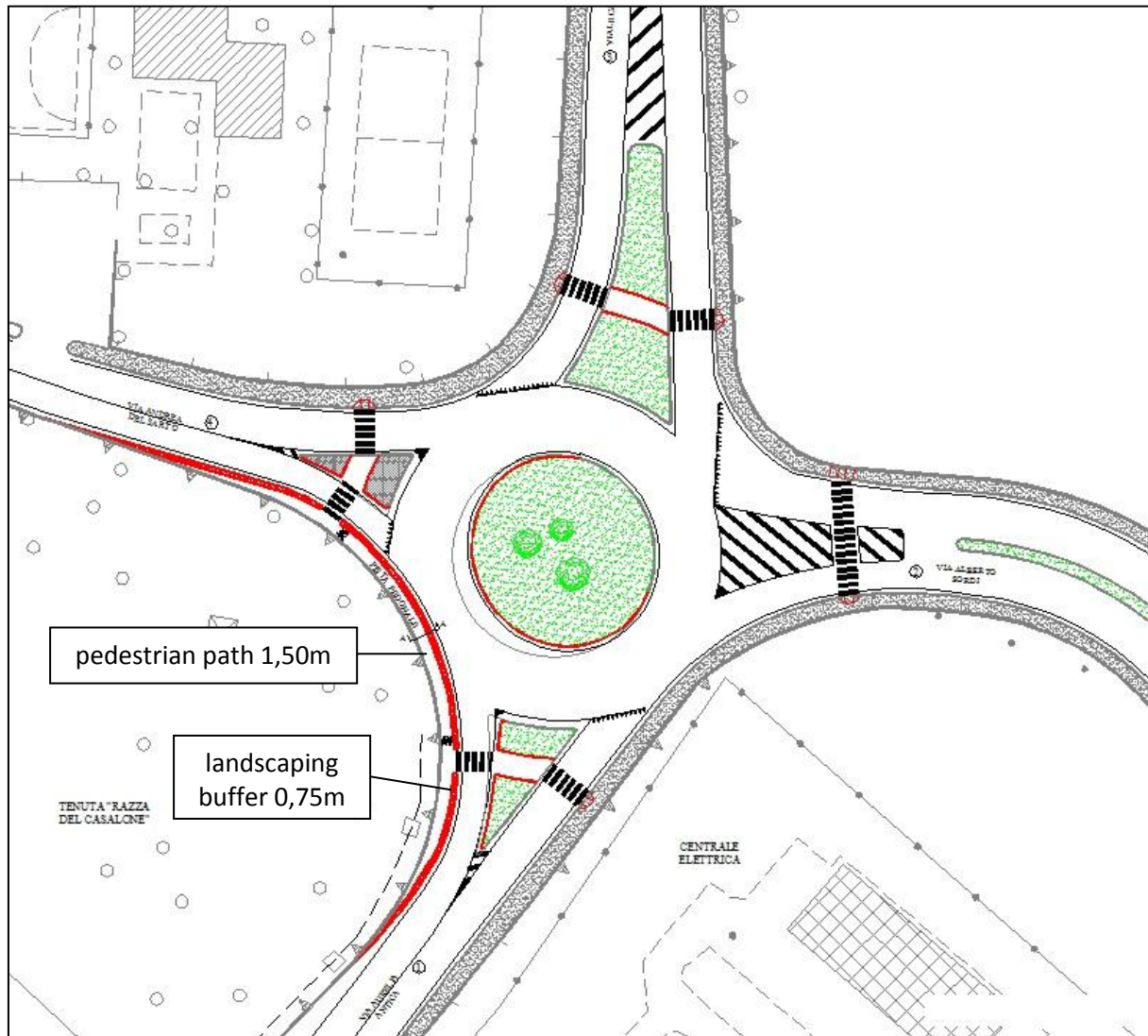
Because of the first solution high cost, I designed another solution, which is cheaper and increase safety only for pedestrians.

- I designed only the pedestrian path between Via Andrea del Sarto and Via Aurelia Antica, where it is currently absent; this path is 1,50 m wide, it is at road level and separated from vehicles by a landscaping buffer 75 cm wide.
- Pedestrian crossings can be obtained by “cutting” parts of the splitter islands.
- The space for the pedestrian path can be obtained in the roundabout area, by reducing the actual roundabout diameter and a little part of the splitter island in Via Aurelia Antica, without expropriations. The modified central island becomes elliptical.

It is important to say that also this solution do not expropriate the racecourse private property, because all of the interventions I described can be realized in the roundabout area, thanks to its big dimensions.

In the drawing on the next page the current situation is represented with the grey line, while the interventions I designed are represented with the red line.



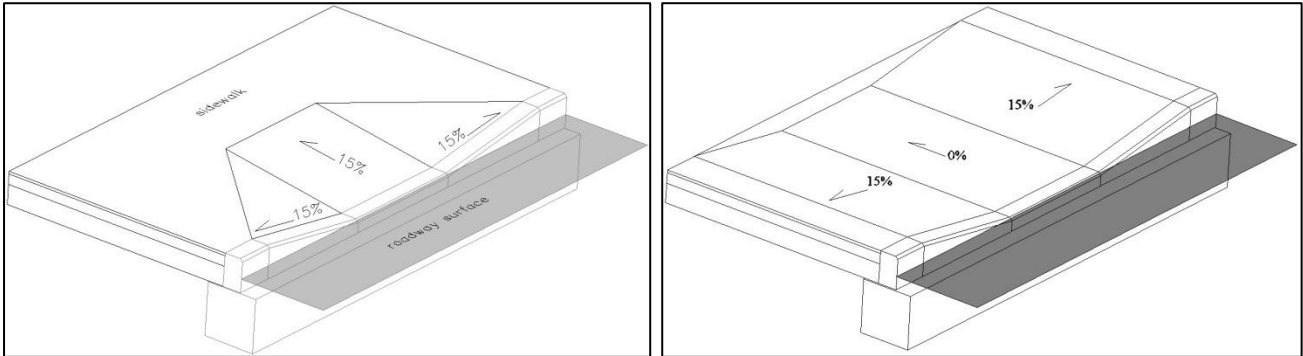


These are the modified geometrical characteristics:

- major inner radius:  $R_{i\ MAX} = 12,50\ m$
- minor inner radius:  $R_{i\ MIN} = 11,70\ m$
- outer radius:  $R_e =$  it does not change from the current situation (22,00 m)
- circulatory roadway width:  $b = 9,00\ m$
- hard shoulder: 0,50 m
- entry width: they do not change from the current situation, except Via Andrea Del Sarto entry width, which becomes 3,50 m between road marking
- exit width: they do not change from the current situation, except Via Aurelia Antica exit width which becomes 4,50 m between road marking
- entry radius: they do not change from the current situation
- exit radius: they do not change from the current situation
- pedestrian path width: 1,50 m + 0,75 m of landscaping buffer

- pedestrian crossings width: 2,50 m
- curb height at pedestrian crossings: = 2,00 cm

Obviously, also with this solution I paid attention to wheelchair-users, including ramps on the sidewalk where I designed the pedestrian crossings. The ramp on the right side of Via Alberto Sordi is different from the others ramps, because here the sidewalk is too narrow. The following illustrations show the ramp detail drawings (the Via Alberto Sordi one is on the right):



The landscaping buffer detail drawing is the same showed in the first solution, on page 13.

These are the benefits we can have with this solution:

- ✓ no expropriations, because my intervention does not concern the racecourse property;
- ✓ safer situation for pedestrians by pedestrian crossings and path;
- ✓ handicapped accessible infrastructure, by curbs with an optimum height where there is the pedestrian crossing;
- ✓ cheaper interventions, which cost about 24.000 €;
- ✓ works need just few days.

I did the estimate of costs by the software “Primus-DCF”, helped by Geom. Enzo Machetti.

### **3-CAMPAIGN TO GET THE HIGH RISK SITE TREATED**

#### **3.1 – PREPARATORY WORKS**

- meeting with the Municipal Police staff of Grosseto: I viewed, after having the authorization from the Commander of Municipal Police, the accidents data of my site; I obtained date, location, reason and involved injured of each accidents which happened in my site since 2005;
- periodical meetings with Prof. Ing. Antonio Pratelli (University of Pisa-Department of Civil Engineering, division of Transport): I have support from University of Pisa to make the project; I made two solutions: the main one and the cheaper one; I have also made the estimate of costs;
- 13<sup>rd</sup> November 2010 – mail to Krzysztof Jamrozik (ETSC-R2R expert): I asked him his opinion about a questionnaire that I formulated in order to know how people feel the roundabout and if they were close to have an accident crossing the roundabout. Krzysztof Jamrozik provided me useful advices on how/where interview people.

This questionnaire is formed by 8 questions, which I translate here:

1. *Have you ever driven in the roundabout by car/motorbike/lorry?*
2. *If you have answered “yes” in question number 1, have you ever had a “near misses” (it is a situation which could result in an accident) because of a pedestrian who was crossing the roundabout? How many times?*
3. *Have you ever had a “near misses” with a cyclist, getting into the roundabout or leaving it? How many times?*
4. *Have you ever crossed on foot the roundabout walking among vehicles, where there isn't the sidewalk? How often?*
5. *If you have answered “yes” in question number 4, have you ever had a “near misses” with a vehicles who was close to knock you down? How many times?*
6. *Have you ever gone along the roundabout with bicycle? How often?*
7. *If you have answered “yes” in question number 6, have you ever had a “near misses” with a vehicles who was close to collide with you? How many times?*
8. *Do you think that this roundabout is dangerous? If you think so, explain why.*

The aim of this questionnaire was to prove that, even if there were not accidents involving pedestrians in the roundabout, this site is unsafe because lots of people were close to have an accidents there. I attach the questionnaire at the end of this report;

- 19<sup>th</sup> November 2010 – meeting with teachers and Director of my high school “Istituto Tecnico per Geometri-A. Manetti”: I borrowed the instrument called “total station” for doing the topographic survey of my site, after handing in a formal written request;
- periodical briefing with Ing. Samuele Guerrini (Municipality of Grosseto-Division of Municipal Police, Traffic sector): I proposed my project to Ing. Guerrini, who said to be interested. He also told me that my project could be enclosed as a completion of some already planned interventions of the Urban Traffic Master Plan between my site and the new shopping center “Aurelia Antica” (about 500 m);
- 2<sup>nd</sup> December 2010 – meeting with Prof. Ing. Antonio Pratelli and telephone call with Ing. Tito Berti Nulli (SINTAGMA s.r.l. Perugia, designer of Urban Traffic Master Plan of Grosseto): as Ing. Tito Berti Nulli is a designer of the Grosseto Urban Traffic Master Plan, my Professor Ing. Antonio Pratelli phoned him to explain the R2R project and to propose my solution. Ing. Berti was interested in it, and he said that it could be possible to insert my project in the next Urban Traffic Master Plan;
- 16<sup>th</sup> December 2010 - meeting with Prof. Ing. Antonio Pratelli: we decided that I could attend my university stage at the Grosseto Traffic Office, where Ing. Guerrini works. In this way, I could learn something else about urban safety, and I could know technicians and people from public administration, who could be useful for my R2R campaign.



### **3.2 – ACTIVITIES IMPLEMENTED**

- 13<sup>st</sup> January 2011 - mail to Alessandra Pallottini, Toyota Motor Italia S.p.A.: as R2R project sponsor, I asked her a letter of support. The aim of this letter was to intensify my position towards public administration, in order to prove that my project has important sponsors. Here I enclose the e-mail I sent her:

<b>Da:</b>	ale.bartolini08@alice.it
<b>Inviato il:</b>	13-gen-2011 23.21
<b>A:</b>	<Alessandra.Pallottini@toyota-europe.com>
<b>Cc:</b>	
<b>Oggetto:</b>	richiesta supporto progetto "R2R"

Gentilissima Sig.ra Pallottini,

Mi chiamo Alessandra Bartolini, sono una studentessa di Ingegneria Civile presso l'Università degli Studi di Pisa, ed ho partecipato al "Roads to Respect Camp 2010", organizzato da ETSC e sponsorizzato da 3M e Toyota, che si è tenuto a Bruxelles dall'11 al 15 Ottobre 2010. Il Suo contatto mi è stato fornito dalla coordinatrice del progetto, Francesca Podda. Le scrivo per chiederle, se possibile, una lettera di supporto da parte di Toyota in cui si specificano le finalità dell' R2R project e l'appoggio che Toyota offre agli studenti partecipanti nel portare avanti la campagna per la realizzazione del progetto elaborato.

Ho da poco terminato la progettazione geometrica di una possibile soluzione al problema di sicurezza stradale riguardante il sito ad alto rischio da me scelto, ed alcune autorità del Comune di Grosseto, luogo di ubicazione di tale sito nonché mia città di residenza, si sono dimostrate interessate al progetto. A breve intendo consegnare al Sindaco una lettera in cui espongo le problematiche di sicurezza del sito scelto e la soluzione che propongo, chiedendogli di inserire tale soluzione progettuale nel Regolamento Urbanistico. Sarebbe veramente utile ai fini della mia "campagna di sponsorizzazione" del progetto poter allegare alla suddetta lettera per il Sindaco una dichiarazione di supporto da parte di Toyota.

Se Le servissero ulteriori dettagli in merito al sito da me scelto ed alla soluzione che propongo, la prego di non esitare a contattarmi. Le posso inviare un layout che mostra le attuali problematiche di sicurezza che si verificano nel sito, nonché le situazioni pre e post intervento.

Nell'attesa di una Sua risposta, Le porgo i miei più cordiali saluti.

Bartolini Alessandra  
Via Attilio Regolo, 3  
58100 Grosseto (Gr)  
cell. 320-5713786

Inviato dalla nuova Alice mail

Mrs. Pallottini sent me the letter of support on the 15<sup>th</sup> of March, in which it is said that Toyota Motor Europe supports my project and it is asked for the administration support. This letter is enclosed at the end of this report;

- 17<sup>st</sup> January 2011 - first meeting attempt with the director of the Poste Italiane-Grosseto office: I would like to present the questionnaire inside the post office near my site because lots of people go there, crossing the roundabout. I had to ask permission to the director, who was not at his office. I tried to phone several times during the next days, but nobody answered;
- 21<sup>st</sup> January 2011 - first meeting with the Mayor's secretary: I left her a letter in which I explained the R2R project, why I chose this high risk site, and I asked him his support; this letter

included also a layout before/after treatment. The secretary took my letter and submitted it to the Traffic Office. After this letter, I officially could get more details about projects near my site, like the one about planned interventions in Via Andrea Del Sarto and S.P. delle Collacchie described in chapter 1. Here I enclose the letter I left (I transfer the Comune di Grosseto stamp as a proof):



Al Sindaco del Comune di Grosseto  
Emilio Bonifazi  
Piazza del Duomo, 1  
58100 Grosseto (Gr)

21 Gennaio 2011

Egregio Sig. Sindaco,

Le scrivo in qualità di studentessa di Ingegneria Civile, dell'Ambiente e del Territorio presso l'Università degli Studi di Pisa che partecipa al progetto europeo "Roads to Respect" (R2R), organizzato da ETSC (European Transport Safety Council) con il supporto di 3M Europa e Toyota. Tale progetto ha lo scopo di migliorare la sicurezza delle infrastrutture stradali agendo su specifici "siti ad alto rischio" in cui si concentrano gli incidenti.

Il sito ad alto rischio che ho personalmente identificato è la rotatoria posta all'intersezione tra Viale Caravaggio, Via Andrea Del Sarto, Via Aurelia Antica e Via Alberto Sordi. Il motivo che mi ha spinto a proporre tale rotatoria nell'ambito del progetto R2R è la sua pericolosità per le utenze deboli, quali pedoni e ciclisti. I fattori di rischio, che hanno assunto maggior rilievo con l'apertura del Centro Commerciale "Aurelia Antica", sono i seguenti:

- assenza di strisce pedonali nelle strade che confluiscono nella rotatoria;
- assenza del marciapiede nella parte esterna dell'anello giratorio compresa tra Via Andrea Del Sarto e Via Aurelia Antica. In conseguenza di ciò, i pedoni che vogliono spostarsi tra Via Del Sarto e Via Aurelia, dove peraltro è ubicato l'ufficio postale, sono teoricamente costretti a compiere un giro di 270° intorno alla rotatoria; in realtà questo non avviene, e tutti i pedoni attraversano direttamente all'interno dell'anello, camminando tra i veicoli;
- infine, è assente la pista ciclabile intorno alla rotatoria. Ciò è causa di vari incidenti che coinvolgono i ciclisti, tra cui un decesso avvenuto a Gennaio 2010.

Nell'ambito del progetto R2R ho sviluppato, in collaborazione con i docenti della Facoltà di Ingegneria dell'Università di Pisa-Dipartimento di Ingegneria Civile, una possibile soluzione al problema. Tale soluzione, che sottolineo essere a basso costo e realizzabile in tempi brevi, prevede l'inserimento delle strisce pedonali e la realizzazione della pista ciclabile interna alla rotatoria, ma separata dal traffico veicolare tramite uno spartitraffico non valicabile di 75 cm. Inoltre, nel tratto tra Via Aurelia Antica e Via Andrea Del Sarto, dove è assente il marciapiede, la pista ciclabile è di larghezza maggiore, in modo da consentire la circolazione promiscua di pedoni e ciclisti. Date le ampie dimensioni attuali della rotatoria, lo spazio necessario all'inserimento di tali elementi può essere ricavato semplicemente risagomando l'isola centrale, senza il bisogno di alcun esproprio.

Confidando nel Suo interesse per la soluzione che propongo, allego alla presente due disegni che mostrano schematicamente le situazioni prima e dopo l'intervento, proponendoLe di discuterne con gli uffici competenti al fine di una eventuale, quanto auspicabile, possibilità di inserimento della soluzione in parola all'interno degli strumenti urbanistici e di programmazione. Allego anche le lettere di supporto di ETSC e Toyota, oltre l'attestato di svolgimento della tesi di laurea presso l'Università di Pisa.

La ringrazio anticipatamente per l'attenzione, e resto in attesa di una Sua risposta.


Con osservanza,

Bartolini Alessandra  
Via Attilio Regolo, 3  
58100 Grosseto (Gr)  
Cell. 320-5713786  
e-mail: ale.bartolini08@alice.it

- 27<sup>th</sup> January 2011 - second meeting attempt with the director of the Poste Italiane-Grosseto office: because of nobody answered on the phone, I came again there; the director was in, but I could not speak directly with him. I spoke with an employee, who told me that they could not give me the permission for the questionnaire, but I had to phone to the central office in Florence. After some phone calls, I obtained the press office manager e-mail, who is called Alessandro Galassi. I sent him an e-mail in which I explained my project and I asked the permission for the questionnaire. Here I enclose the e-mail I sent:

**Da:** ale.bartolini08@alice.it  
**Inviato il:** 27-gen-2011 16.52  
**A:** <galassia2@posteitaliane.it>  
**Cc:**  
**Oggetto:** richiesta autorizzazione per questionario in Grosseto

**Allegati:**

 Questionario.pdf (92K)

Alla cortese attenzione del Sig. Alessandro Galassi, responsabile Comunicazione Territoriale Poste Italiane.

Le scrivo in qualità di studentessa di Ingegneria Civile, dell'Ambiente e del Territorio presso l'Università degli Studi di Pisa che partecipa al progetto europeo "Roads to Respect" (R2R), organizzato da ETSC (European Transport Safety Council) con il supporto di 3M Europa e Toyota. Tale progetto ha lo scopo di migliorare la sicurezza delle infrastrutture stradali agendo su specifici "siti ad alto rischio" in cui si concentrano gli incidenti.

Il sito ad alto rischio che ho personalmente identificato è una rotatoria urbana a Grosseto posta all'intersezione tra Viale Caravaggio, Via Andrea Del Sarto, Via Aurelia Antica e Via Alberto Sordi, e proprio nei pressi di tale rotatoria, in Via Davide Lazzeretti, è ubicato l'Ufficio Postale Grosseto 5.

Chiedo pertanto a Poste Italiane l'autorizzazione a sottoporre agli utenti all'interno dell'ufficio postale sopraccitato, un questionario anonimo riguardante la sicurezza stradale nella rotatoria in esame.

Allego alla presente e-mail il file PDF del questionario che intendo sottoporre. Per ulteriori informazioni, non esiti a contattarmi.

La ringrazio anticipatamente per l'attenzione, e resto in attesa di una Sua risposta.

Cordiali saluti,

Bartolini Alessandra  
Via Attilio Regolo, 3  
58100 Grosseto (Gr)  
Cell. 320-5713786  
e-mail: ale.bartolini08@alice.it

Inviato dalla nuova Alice mail

The day after Mr. Galassi replied that it is impossible to present my questionnaire inside the post office, without explanations. This is his reply:

**Da:** GALASSIA2@posteitaliane.it  
**Inviato il:** 28-gen-2011 10.33  
**A:** "ale.bartolini08@alice.it" <ale.bartolini08@alice.it>  
**Cc:** "GALLINELLA FABIO (MP)" <gallinellaf@posteitaliane.it>, "CITO PIERPAOLO (CE)" <citopier@posteitaliane.it>, "RICCI MASSIMILIANO (CE)" <RICCIM40@posteitaliane.it>  
**Oggetto:** R: richiesta autorizzazione per questionario in Grosseto

Gent.ma Alessandra,  
siamo spiacenti di comunicarLe l'impossibilità di poter distribuire il questionario all'interno dell'ufficio postale in questione.

Cordiali saluti,

**Alessandro Galassi**  
**Responsabile Servizi di Comunicazione Territoriale**  
**Toscana-Umbria**  
Via Porta Rossa, 8 - 50123 Firenze  
Tel: 055 2736327  
Fax: 055 2736558  
Cell: 377 1617506  
Mailto: galassia2@posteitaliane.it

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**Da:** ale.bartolini08@alice.it [mailto:ale.bartolini08@alice.it]  
**Inviato:** giovedì 27 gennaio 2011 16.52  
**A:** GALASSI ALESSANDRO (MP)  
**Oggetto:** richiesta autorizzazione per questionario in Grosseto

Inviato dalla [nuova Alice mail](#)

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La presente comunicazione elettronica contiene informazioni aziendali non private.  
Eventuali risposte alla presente potrebbero essere conosciute, per motivi organizzativi e di sicurezza, dal personale di Poste Italiane S.p.A.

- 28<sup>th</sup> January 2011 – Urban Technical Office: after I had left the letter to the Mayor office, I could left the dwg file of my project to the office which design the Town Planning. The technician inserted the first solution I explained in chapter 2 in the new Town Planning, which was approved at the end of March. So now planned interventions in Grosseto include also my first solution, as I am going to explain in chapter 4. In spite of this, I continued with my R2R campaign; in fact, this approval in the Town Planning means that my project might be realized in several years, whereas it had better realize at least pedestrian crossings as soon as possible;
- 29<sup>th</sup> January 2011 – questionnaire to some friends: because of the refusal of the Poste Italiane manager, I left the questionnaire to my friend's restaurant, which is near my site. After some



days, I received seven questionnaires filled in. Moreover, I interviewed some people I know who move often in the roundabout area. I obtained ten questionnaires in all, with this results:

- 10 people out of 10 drove in the roundabout by car/motorcycle/lorry;
- 3 of them were close to collide with a pedestrian who was crossing the roundabout;
- 3 of them were close to collide with a cyclist;
- 3 people out of 10 crossed the roundabout on foot, walking among cars;
- 2 of them were close to be knock down by a vehicle;
- 3 people out of 10 went along the roundabout with bicycle;
- 1 of them was close to collide with a vehicle;
- 7 people out of 10 think that the roundabout is unsafe, mostly because they feel that there is not observance of driving rules and because there are not pedestrian crossings.

- 3<sup>rd</sup> February 2011 – first meeting with Rolando Boni, President of the senior center “I Saggi”: as I explained in chapter 1, near my high risk site there is the senior center “I Saggi” and the voluntary association “Auser”. I spoke with Rolando Boni, the senior center president, who told me that the association “Auser” has to take old people to the post office by car. It happens partly because this people do not know how to cross the roundabout, owing to pedestrian crossings absence, and municipality do not want to do anything. I gave him some questionnaires to leave to these elderly, and I asked him to organize at the senior center a meeting with these people. With this meeting I would like to have the written support from the citizens, in order to present it to public administration. He told me to organize this meeting later because they had some parties at the senior center, adding that during this parties «they only think to dance»;
- 12<sup>th</sup> February 2011 – second meeting with Rolando Boni, President of the senior center “I Saggi”: I went again to the senior centre in order to have the questionnaires back, but Rolando Boni had forgotten them. I also asked again if it was possible to organize the meeting with local people, but he told me once more to organize this meeting later because they had other meetings;
- 15<sup>th</sup> February / 25<sup>th</sup> March 2011 – stage at the Traffic Office: in order to learn something else about urban safety, and to know technicians and people from public administration who could be useful for my R2R campaign, I decided to attend my university stage at the Grosseto Traffic Office, where Ing. Guerrini works as engineer. He was my tutor, and he gave me the assignment to design interventions about pedestrian safety in Grosseto; in fact, Tuscany administration had sent an announcement of competition with which are given fund for project about road safety.



During the stage, I proposed many times both to Ing. Guerrini and to the councilor responsible of traffic to include my project with these interventions, at least the second solution explained in chapter 2. In the beginning they said that probably I could include my project, but later Ing. Guerrini said that it was not possible because there was not enough money to realize all of the interventions, and he preferred to realize other solutions in the city centre;

- 2<sup>nd</sup> March 2011 – third meeting with Rolando Boni, President of the senior center “I Saggi”: I went again to Rolando Boni to organize the meeting with citizens. He told me that he wanted to organize it but it was impossible until April, because they had the president election on the 31<sup>st</sup> of March. He also told me that I could write in the first report that people strongly want the high risk site treated, that he gave me all his support, and that we could organize the meeting in April;
- 18<sup>th</sup> March 2011 – meeting with Municipal Police Commander: during my stage, Ing. Guerrini organized a meeting with Dott. Felice Carullo, the Municipal Police Commander and the head of Traffic Office, to present him the project I did about pedestrian safety in Grosseto (not my R2R project, but my work during the stage); taking advantage of this opportunity, I explained my R2R project to Dott. Felice Carullo, asking to realize at least pedestrian crossings in Viale Caravaggio and Via Alberto Sordi (with ramps on the sidewalk for wheelchair-users). He accepted it and he made a note of this intervention;
- 4<sup>th</sup> April 2011 – meeting with Ing. Samuele Guerrini (Municipality of Grosseto-Division of Municipal Police, Traffic sector): after the end of my stage I came back to the Traffic Office to know if my project was being realized. Ing. Guerrini phoned to the Grosseto Parcheggi manager, in order to realize two pedestrian crossings in my high risk site. They decided to go to the roundabout, to inspect the area, but actually they forgot it and they never went there;
- 11<sup>th</sup> April 2011 – fourth meeting with Rolando Boni, President of the senior center “I Saggi”: I went for the fourth time to Rolando Boni to organize the meeting with citizens. He told me again that he wanted to organize it but at that time he was not in Grosseto. So, he told me to recall him after the 26<sup>th</sup> of April.

At that point I realized that Rolando Boni is unreliable, and I decided not to call him again; in fact, waiting for his support was completely useless, just a waste of time;

- 25<sup>th</sup> April 2011 – meeting with Geom. Enzo Machetti (Municipality of Grosseto-Division of Municipal Police, Traffic sector): during my stage at the Traffic Office I worked also with Geom. Enzo Machetti, and I realized that he is a competent and reliable person. So, I told him my experience with Rolando Boni and he suggested not to waste time with him; moreover, he told me that he knows Vera Tamburelli, the voluntary association “Auser” president, who is very reliable. He called her, introducing my project, and after that I could organize a meeting with her;
- 2<sup>nd</sup> May 2011 – meeting with Vera Tamburelli, president of the voluntary association “Auser”: as I have introduced shortly before, the voluntary association “Auser” helps people with physical problems and handicap, also taking old people who lives in district Gorarella to the post office near my high risk site. I explain to her my project, asking her written support in order to have more strength with public administration. She was interested in my project and in my solution, and on the 6<sup>th</sup> of May she wrote me a letter of support.

In this letter she explains that my project does not resolve all the situation, because for old people would be convenient to transfer again the post office in district Gorarella, where it was located since some years ago. Anyway, she says that my solution is interesting and it resolves some of their problems, like the unsafe situation for people who have to cross the roundabout. In particular, she write that it is dangerous to cross the area because there are not pedestrian crossings, even if there were not accidents involving pedestrians. Finally, she says that she strongly thinks “it’s better safe than sorry”, supporting my project and asking for its realization. I attach her letter, which is signed also by Rolando Boni, at the end of this report;

- 11<sup>th</sup> May 2011 – message to Prof. Massimo Ciani, town councilor candidate: on the 15<sup>th</sup>/16<sup>th</sup> of May there was the Mayor’s election in Grosseto, in which Prof. Massimo Ciani was a candidate as a town councilor. Mr. Ciani was my sister’s professor at the high school, so I thought to take advantage of this electoral campaign by contacting him. I wrote him a message on Facebook describing my R2R project, stressing that problems in my high risk site are strongly felt from citizens, also with the “Auser” voluntary association support. Finally, I asked Mr. Ciani the opportunity of talking better with him about my solution. Here I enclose the message I sent him:

Buongiorno Prof. Ciani. Sono Alessandra Bartolini, studentessa di Ingegneria Civile presso l'Università di Pisa, nonché sorella di Sofia Bartolini, sua studentessa dell'Istituto Commerciale. Immagino che lei sia molto impegnato in questo periodo, tra l'insegnamento e le imminenti elezioni, ma vorrei gentilmente chiederle alcuni minuti per poterle parlare di un progetto per la sicurezza stradale che sto portando avanti da alcuni mesi. Si tratta di un progetto svolto nell'ambito di un progetto europeo chiamato "Roads To Respect", per il quale sono stata selezionata ad ottobre 2010, che riguarda la messa in sicurezza per l'attraversamento della rotatoria situata nei pressi dell'ippodromo, intervento che richiederebbe appena 3000 euro (22.000 per una soluzione completa). Tengo a precisare che le problematiche in quell'area sono molto sentite, infatti ho anche il supporto scritto dell'associazione Auser e del centro sociale "I saggi" di Gorarella, oltre che delle società 3M e Toyota e naturalmente, dell'Università di Pisa. Dato che risulta alquanto difficoltoso descrivere il progetto su Facebook, le vorrei chiedere, dato che lei è candidato consigliere per le prossime elezioni, di poterle parlare del progetto a voce. Spero in un suo interessamento, e in una sua risposta. La ringrazio per l'attenzione.

Some days later he replied me with a nice, but useless, message: in fact, he wrote me a lot of things that had not anything to do with my project, without answering to my proposal, as only a politician is able to do! So, I immediately understood that I had not chance of success with him;

- 18<sup>th</sup> May 2011 – accidents data updating: I asked to Municipal Police and Comando Carabinieri of Grosseto if there were accidents in the roundabout area from August 2010 to May 2011, in order to update data I already had. There were not other accidents during this period;
- 20<sup>th</sup> June 2011 – meeting with Ing. Samuele Guerrini (Municipality of Grosseto-Division of Municipal Police, Traffic sector): I took the first level degree on the 6<sup>th</sup> of June, and in my thesis I redesigned the roundabout including the cycle-way where currently there is the interruption (see chapter 1 pag.9 and chapter 2); in addition to the first and the second solutions described in chapter 2, I planned to rebuild the roundabout with a turbo-roundabout. So, after my degree I came again to Ing. Guerrini to propose once more my project, at least the second solution (only the pedestrian path and the pedestrian crossings). I showed him the letters of support from the voluntary association “Auser”, from Toyota and from ETSC, and at long last he accepted my project.

He decided to realize two pedestrian crossings, in Viale Caravaggio and Via Alberto Sordi, but not the pedestrian path; so it is impossible to realize the pedestrian crossings in Via Aurelia Antica and Via Andrea Del Sarto.

Moreover, Ing. Guerrini said that it was necessary to send another letter to the Mayor, writing about this decision; then the Mayor’s office could forward officially my letter to the Traffic Office, and Ing. Guerrini could write the ordinance for realize these pedestrian crossings; unfortunately, this is the Italian bureaucracy;

- 21<sup>th</sup> June 2011 – meeting with Geom. Enzo Machetti (Municipality of Grosseto-Division of Municipal Police, Traffic sector): together with Enzo Machetti I redesigned the second solution, including only the two pedestrian crossings that Ing. Guerrini agreed to realize; for further details, see TAV. 1 which is enclosed at the end of this report;
- 27<sup>th</sup> June 2011 - second meeting with the Mayor’s secretary: I left her a second letter in which I explained again the R2R project and the solution I designed together with Ing. Guerrini and Enzo Machetti, asking for the Mayor’s official endorsement. The secretary took my letter and

submitted it to the Mayor and to the Traffic Office. Here I enclose the letter I sent (I transfer the Comune di Grosseto stamp as a proof):



Al Sindaco del Comune di Grosseto  
Emilio Bonifazi  
Piazza del Duomo, 1  
58100 Grosseto (Gr)  
06 Luglio 2011

Egregio Sig. Sindaco,

Le scrivo in qualità di laureata triennale in Ingegneria Civile, dell’Ambiente e del Territorio e studentessa magistrale di Ingegneria Idraulica, dei Trasporti e del Territorio presso l’Università degli Studi di Pisa che partecipa al progetto europeo “Roads to Respect” (R2R), organizzato da ETSC (European Transport Safety Council) con il supporto di 3M Europa e Toyota. Tale progetto ha lo scopo di migliorare la sicurezza delle infrastrutture stradali agendo su specifici “siti ad alto rischio” in cui si concentrano gli incidenti.

Nella lettera depositata presso i Suoi uffici in data 21 Gennaio 2011, successivamente inoltrata al Settore Polizia Municipale – Servizio Traffico e Viabilità, ho esposto le problematiche di sicurezza stradale del sito ad alto rischio individuato, consistente nella rotatoria posta all’intersezione tra Viale Caravaggio, Via Andrea Del Sarto, Via Aurelia Antica e Via Alberto Sordi.

Come già ampiamente esposto nella lettera suddetta, tali mancanze di sicurezza riguardano soprattutto i pedoni: infatti, questi attraversano l’intersezione all’interno dell’anello giratorio, camminando tra le auto, a causa dell’assenza di una parte del marciapiede e di tutti gli attraversamenti pedonali. Oltre a ciò, l’attraversamento delle quattro arterie suddette confluenti nella rotatoria è praticamente impossibile per le persone su sedia a ruote, in quanto non esistono rampe che consentano la salita e discesa dai marciapiedi.

In seguito alla precedente lettera inviataLe, inoltrata al Settore Polizia Municipale – Servizio Traffico e Viabilità, ho preso contatti con l’Ing. Samuele Guerrini ed il Geom. Enzo Machetti, sviluppando ed esponendo, in collaborazione anche con i docenti della Facoltà di Ingegneria dell’Università di Pisa – Dipartimento di Ingegneria Civile, alcune possibili soluzioni progettuali alle problematiche sopra esposte.

Si è evidenziata la possibilità di realizzare, in tempi brevi e a basso costo, due attraversamenti pedonali nei pressi della rotatoria in oggetto: uno in Viale Caravaggio ed uno in Via Alberto Sordi, come è possibile vedere in dettaglio dal disegno allegato alla presente lettera.

Il costo di tale intervento ammonta a circa 3000 euro, comprensivi di ogni lavorazione e ripristino della segnaletica orizzontale, portando peraltro notevoli benefici alla mobilità pedonale dell’area.

Mi preme sottolineare che le problematiche di sicurezza stradale precedentemente esposte sono particolarmente sentite dai residenti del quartiere Gorarella, soprattutto dalla sua componente anziana e con difficoltà motorie.

Le associazioni Auser, Filo d’Argento e Centro Sociale “I Saggi” di Grosseto, venuti a conoscenza del progetto “Roads To Respect” a cui partecipo e della possibilità di realizzare tale intervento, hanno fornito sostegno ed appoggio alla soluzione progettuale descritta, supportandola anche mediante lettera di cui allego una copia.

Confidando nel Suo interesse per la soluzione che propongo, allego alla presente il disegno che mostra schematicamente la situazione prima e dopo l’intervento, proponendoLe di discuterne con gli uffici competenti al fine di una eventuale, quanto auspicabile, possibilità di inserimento della soluzione in parola all’interno degli

strumenti urbanistici e di programmazione. Allego anche le lettere di supporto di ETSC (European Transport Safety Council), di Toyota Motor Italia S.p.A. e di Auser-Volontariato Grosseto.

La ringrazio anticipatamente per l'attenzione, e resto in attesa di una Sua risposta.

Con osservanza,

Alessandra Bartolini  
Via Attilio Regolo, 3  
58100 Grosseto (Gr)  
Cell. 320-5713786  
e-mail: ale.bartolini08@alice.it

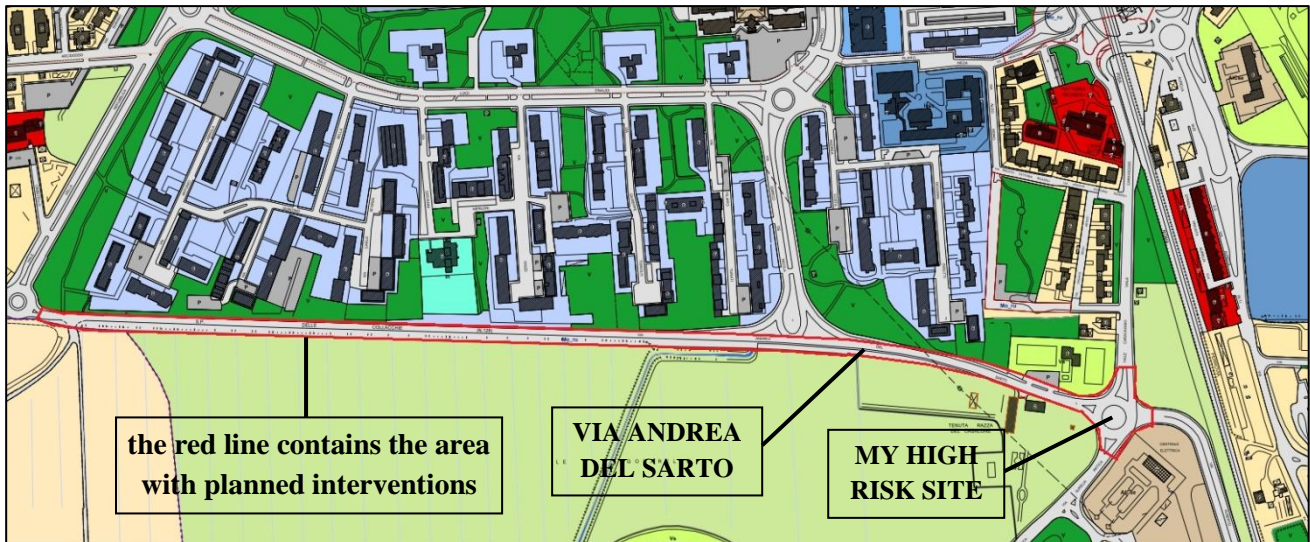
- 6<sup>th</sup> July 2011 - meeting with Geom. Enzo Machetti, Luca Corridoni and Geom. Michaela Ercolani (Municipality of Grosseto-Division of Municipal Police, Traffic sector): I came to the Traffic Office to know if my letter to the Mayor was been forwarded to Ing. Guerrini. In fact, he could write the ordinance for realize the two pedestrian crossings only after have received the letter I sent to the Mayor's office.  
I discovered that my letter was submitted to the Municipal Police main office but not to the Traffic Office. So, Luca Corridoni took my letter and registered it again, directly in the Traffic Office; it is possible to see the Polizia Municipale stamp in the previous letter I have enclosed;
- 12<sup>th</sup> July 2011 - meeting with Geom. Michaela Ercolani (Municipality of Grosseto-Division of Municipal Police, Traffic sector): Michaela Ercolani took my project and wrote the ordinance in which it is ordered to realize the two pedestrian crossings. Unfortunately, Ing. Guerrini did not sign it, saying that he would rather wait Enzo Machetti, who was on holiday until the 18<sup>th</sup> of July. I did not understand this decision because Mr. Machetti had already approved my project; moreover, the Traffic Office head is Ing. Guerrini, so the ordinance had to be signed by him, not by Enzo Machetti;
- 19<sup>th</sup> July 2011 - meeting with Geom. Enzo Machetti (Municipality of Grosseto-Division of Municipal Police, Traffic sector): I came again to the Traffic Office and I explained to Mr. Machetti that Ing. Guerrini had not signed the ordinance because he was waiting for him. Fortunately, Mr. Machetti helped me and sent the ordinance directly to Dott. Felice Carullo, the Municipal Police Commander, who gave the approval to my project and signed the ordinance on the 20<sup>th</sup> of July.



## 4-ACHIEVEMENTS OF THE PROJECT

### 4.1 – FIRST ACHIEVEMENT: MY PROJECT INSERTED IN THE TOWN PLANNING

As I disclosed in chapters 1 and 3, my project has been inserted in the new Town Planning, approved at the end of March. Here I enclose again a part of this Town Planning – TAV. 20, in which it is possible to see that my high risk site is included in the area with planned interventions; the red line represents this area:



In particular, at the beginning it was planned to widen Via Andrea Del Sarto. With my R2R campaign I proposed to insert my project in this planned intervention, giving to the Town Planning Office the project of the first solution I described in chapter 2 (the solution which includes also the cycle-path).

Ing. Guerrini and a Town Planning Office technician took my project and inserted it in the new Town Planning, as it is possible to see in the previous drawing.

Moreover, it is possible to see the complete plan TAV.20 in the Comune di Grosseto web site; the link is: [http://www.gol.grosseto.it/regolamento\\_urbanistico/02\\_PR/PR-03/](http://www.gol.grosseto.it/regolamento_urbanistico/02_PR/PR-03/) - file PR-03\_20.pdf.

It is important to specify that it does not mean that my first solution will be realized within few years. In fact, the Via Andrea Del Sarto widening is just planned but there is not a project yet. It means that, when technicians design Via Andrea Del Sarto widening, they will take into consideration my project, too.

Moreover, it is necessary to wait for project financing (also for Via Andrea Del Sarto widening), so it would take many years.

#### **4.2 – SECOND ACHIEVEMENT: PEDESTRIAN CROSSINGS ARE BEING REALIZED**

As I disclosed in chapter 3, Ing. Guerrini gave his approval to realize two pedestrian crossings, in Viale Caravaggio and Via Alberto Sordi. These interventions are a part of the second solution I described in chapter 2; in fact, this solution inserted also the pedestrian path and the other two pedestrian crossings in Via Aurelia Antica and Via Andrea Del Sarto, but Ing. Guerrini chose to realize only the two pedestrian crossings I have described at the beginning.

Here I enclose the drawing which shows the interventions which are currently being realized; for further details, it is possible to see the drawing which is attached at the end of this report:



In order to prove that my solution has been approved, I enclose the ordinance with the digital signature of Dott. Felice Carullo, Municipal Police Commander and Traffic Office head:



## Città di Grosseto

Settore: POLIZIA MUNICIPALE  
SERVIZIO VIGILANZA TERRITORIALE

### Ordinanza Dirigenziale n° 621 del 20/07/2011

Oggetto: **CENTRO ABITATO DI GROSSETO - VIA CARAVAGGIO - VIA A. SORDI - ISTITUZIONE DUE NUOVI ATTRAVERSAMENTI PEDONALI - MODIFICHE TEMPORANEE ALLA CIRCOLAZIONE STRADALE**

#### IL DIRIGENTE

**RILEVATO** che nell'area della rotatoria tra le Vie Caravaggio, A. Sordi, A. Del Sarto e Aurelia Antica, non esiste alcun attraversamento pedonale che permetta la continuità in sicurezza del percorso pedonale costituito dai marciapiedi esistenti nelle vie suddette;

**RITENUTO** opportuno migliorare le condizioni di sicurezza dei pedoni, istituendo due attraversamenti pedonali sulla Via Caravaggio e sulla Via A. Sordi, in prossimità della rotatoria suddetta;

**RITENUTO** di non dover procedere alla comunicazione d'avvio del procedimento ai sensi dell'art. 7 L. 241/90 e successive modificazioni ed integrazioni, data la generalità dei destinatari cui il presente provvedimento è destinato;

**VISTI** gli articoli 5 comma 3, 6 commi 4 e 5 lettera d), 7 del Dlgs 30 aprile 1992, n. 285 "Nuovo Codice della Strada", le norme del relativo Regolamento di Esecuzione ed Attuazione e successive modificazioni ed integrazioni con le quali si dà facoltà ai Comuni di stabilire obblighi, divieti e limitazioni a carattere permanente e temporaneo per quanto riguarda la circolazione veicolare sulle strade comunali;

**VISTO** l'art. 107 del Testo Unico dell'Ordinamento degli Enti Locali adottato con Decreto Legislativo n. 267 del 18 agosto 2000 ed in particolare il comma 5;

#### ORDINA

1. L'istituzione di un attraversamento pedonale sulla Via Caravaggio, posto a circa ml 8,40, misurati dalla cuspide dell'isola spartitraffico, sulla corsia con senso di marcia verso il centro città, come evidenziato nella planimetria allegata;
2. L'istituzione di un attraversamento pedonale sulla Via A. Sordi, posto a circa ml 11,25 misurati dalla cuspide dell'isola spartitraffico, sulla corsia con senso di marcia verso la rotatoria, come evidenziato nella planimetria allegata;
3. La rimozione, mediante cancellatura, di parte della zebratura dell'isola spartitraffico sulla Via A.Sordi, in corrispondenza dell'attraversamento pedonale istituito, come evidenziato nella planimetria allegata;
4. Sono revocati tutti i provvedimenti in contrasto con la presente Ordinanza Dirigenziale.

*Documento informatico firmato digitalmente ai sensi e con gli effetti di cui agli artt. 20 e 21 del D.Lgs n.82/2005; sostituisce il documento cartaceo e la firma autografa.*



**DISPONE**

- A. La notifica della presente disposizione alla società GROSSETO PARCHEGGI s.r.l., avente sede legale in Grosseto Via Orcagna, Partita I.V.A. e C.F.: 01305350538, mediante invio telefax al numero 0564 462290, che dovrà provvedere all'esecuzione del presente provvedimento;
- B. La notifica della presente ordinanza al Settore LLPP del Comune di Grosseto, Servizio Manutenzione Strade mediante invio telefax al numero 0564 488677, al fine di provvedere ai necessari lavori stradali di adeguamento alla normativa vigente in materia di portatori di handicap, realizzando le rampe di salita/discesa, nonché al taglio dell'isola spartitraffico, per una larghezza di m 3,00, come indicato nella planimetria allegata, in corrispondenza dell'attraversamento pedonale sulla Via Caravaggio;
- B. La Polizia Municipale e le forze di Polizia dello Stato sono incaricate di far osservare la presente ordinanza;
- C. Il Servizio Traffico e Mobilità è incaricato del controllo della corretta esecuzione della presente Ordinanza Dirigenziale;
- D. Ai sensi dell'articolo 3, comma 4, della legge 7 agosto 1990, n. 241, avverso il presente provvedimento è ammesso entro il termine di sessanta giorni dalla notificazione ricorso al Tribunale Amministrativo Regionale di Firenze, ovvero, in alternativa, ricorso straordinario al Presidente della Repubblica, da proporre entro centoventi giorni dalla data di notificazione, ai sensi dell'articolo 9 del D.P.R. Del 24 dicembre 1971, n. 1199;
- E. Ai sensi dell'art.37, comma 3, del d.lgs. 285/92 contro i provvedimenti e le ordinanze che dispongono o autorizzano la collocazione della segnaletica è ammesso ricorso gerarchico al Ministro delle Infrastrutture e dei Trasporti entro sessanta giorni e con le formalità stabilite nell'art. 74 del Regolamento di Esecuzione ed Attuazione del Codice della Strada.

**Il Dirigente**

**Dr. Felice CARULLO**

*Si informa che il procedimento è di competenza del Servizio Traffico e Mobilità del Settore Polizia Municipale, il Responsabile del Procedimento è il Geom. Enzo Machetti e dell'istruttoria è la Geom. Michaela Ercolani. Gli atti relativi all'istruttoria sono a disposizione c/o Servizio Traffico e Mobilità, Via degli Apostoli civ. 11 – Tel 0564 488335*

*Documento informatico firmato digitalmente ai sensi e con gli effetti di cui agli artt. 20 e 21 del D.Lgs n.82/2005: sostituisce il documento cartaceo e la firma autografa.*

With this ordinance it is officially approved and ordered the realization of these two pedestrian crossings. As its meaning is very important, I will translate here the main part of the ordinance:

*The executive orders:*

1. *To build a pedestrian crossing in Via Caravaggio, 8,40 m from the splitter island tip in the lane which goes to the city centre, as it is possible to see on the attached plan;*
2. *To build a pedestrian crossing in Via A. Sordi, 11,25 m from the splitter island tip in the lane which goes to the roundabout, as it is possible to see on the attached plan;*
3. *To remove part of the splitter island marking in Via A. Sordi where the pedestrian crossing will be realized, as it is possible to see on the attached plan.*

*The executive give orders that:*

- A. *The society GROSSETO PARCHEGGI s.r.l., registered office in Grosseto Via Orcagna, VAT number 01305350530, must be informed by telefax number 0564-462290. They must realize road markings;*
- B. *Comune di Grosseto – Section of Public Works – Roads Maintenance Service must be informed by telefax number 0564-488677, in order to realize ramps on the sidewalk for wheelchair-users, and to cut the splitter island in Via Caravaggio for a width of 3,00 m where the pedestrian crossing will be realized, as it is possible to see on the attached plan.*

Pedestrian crossing markings have already been realized by *GROSSETO PARCHEGGI s.r.l.*, while ramps on the sidewalk for wheelchair-users and the “cut” of the splitter island in Viale Caravaggio have not been realized yet. In fact, this part of the intervention is an assignment of *Roads Maintenance Service*, who realize this kind of road works according to public administration engagements. Anyway, it takes no more than two months, so these two pedestrian crossings will be completed not lather then the end of October (considering that August is a holidays period).

Here I enclose four photographs which show the situation before and after this first intervention:



Viale Caravaggio – before treatment



Viale Caravaggio – after the first treatment





Via Alberto Sordi – before treatment



Via Alberto Sordi – after the first treatment

This achievement is just a little step, because it does not resolve all of the problems concerning the high risk site. Anyway, this step is very important because it means that public administration is taking into consideration citizens problems in this area. In particular, these are the benefits they will have with these two pedestrian crossings:

- ✓ safer situation for pedestrians who want to cross the site;
- ✓ handicapped accessible infrastructure, by curbs with an optimum height where there are pedestrian crossings;
- ✓ cheaper interventions, which cost 3.500 € (I did the estimate of costs by the software “Primus-DCF”, helped by Geom. Enzo Machetti. It is attached at the end of this report);
- ✓ works need just few days.

### **4.3 – ACHIEVEMENTS I INTEND TO IMPLEMENT**

I strongly want to follow future developments about the project of the cycle-way Grosseto – Principina a Mare and the project of Via Andrea Del Sarto widening. In fact, the first solution I described in chapter 2 was enclosed in the Town Planning as a completion of these interventions. In spite of this, it is important that I continue to propose my project to public administration in order to be sure of its inclusion in these interventions.

In particular, Prof. Ing. Antonio Pratelli and I are going to propose my thesis, in which I re-designed all the intersection and the cycle-path, to public administration. We hope they will be interested in this project, especially in the cycle-path I designed to eliminate the interruption between the beginning of the cycle-way Grosseto – Marina di Grosseto and the beginning of the cycle-way Grosseto – Principina a Mare.

## *Special Thanks*

*University of Pisa – Faculty of Engineering*

*Polizia Municipale (Municipal Police) – Grosseto*

*Dott. Felice Carullo – Municipal Police Commander*

*Servizio Traffico e Mobilità (Traffic Office) – Grosseto*

*Comando Compagnia Carabinieri – Grosseto*

*Dott. Emilio Bonifazi – Mayor of Grosseto*

*Ufficio Regolamento Urbanistico (Urban Technical Office) – Grosseto*

*High school “Istituto Tecnico per Geometri – A. Manetti” – Grosseto*

*Ing. Tito Berti Nulli – SINTAGMA s.r.l. Perugia*

*Alessandra Pallottini – Toyota Motor Italia S.p.A.*

*Giancarlo and Antonella, with their lunch bar “Da Antonella”*

*Vera Tamburelli – President of the voluntary association “Auser”*

*Luca Corridoni – Traffic Office*

*Michaela Ercolani – Traffic Office*

*Ing. Samuele Guerrini – Traffic Office*

I would like to thank in particular *Enzo Machetti (Traffic Office)* for his advice and essential help during my campaign, and *Prof. Ing. Antonio Pratelli (University of Pisa – Faculty of Engineering)* for his support and teaching.

Moreover, I really thank *ETSC, 3M Company* and *Toyota Motor*, who gave me the opportunity of improving my knowledge.

Spett.le  
Comune di Grosseto

Roma, 15 marzo 2011

Oggetto: Lettera presentazione

Con la presente vi informiamo che la sig.na Alessandra Bartolini, studentessa della Facoltà di Ingegneria Civile presso l'Università degli Studi di Pisa è impegnata nello sviluppo di un progetto che prevede lo studio per la predisposizione e l'implementazione di un intervento volto al miglioramento della sicurezza di un sito stradale.

Tale attività è svolta nell'ambito di una campagna europea per il miglioramento della sicurezza stradale, chiamato R2R (Road to Respect), organizzato dall'ETSC (European Transport Safety Council) una Organizzazione Non Governativa Belga con sede a Bruxelles supportata anche da Toyota Motor Europe.

Per tali motivi vi chiediamo di fornire il supporto, per quanto di Vostra competenza, alla realizzazione del progetto proposto dalla sig.na Bartolini

Cordiali saluti

Alessandra Pallottini  
Corporate & Government Affairs Manager  
Public Relations





**AUSER VOLONTARIATO GROSSETO**

**VIA DE NICOLA 19**

**Tel. E Fax 056424047 – e-mail [info@ausergrosseto.org](mailto:info@ausergrosseto.org)**

Le associazioni Auser, Filo d'Argento e Centro Sociale I Saggi di Grosseto che operano da molti anni nell'ambito del sostegno agli anziani soli e con difficoltà, fin dall'epoca della proposta di trasferimento delle Poste da Via Papa Giovanni a Via David Lazzaretti, meglio conosciuta dai Grossetani come zona "Casalone" hanno denunciato il disservizio che si sarebbe verificato e ciò per due ordini di motivi: il primo perché gli anziani, come maggiori utilizzatori di tale servizio si sarebbero visti peggiorare (per la distanza dal centro abitato) le condizioni di mobilità essendo peraltro la zona scarsamente coperta dai mezzi di trasporto pubblico, il secondo perché la viabilità è compromessa dall'attraversamento di una arteria di traffico importante collegato con le frazioni di Marina e di Principina oltre che da Castiglione della Pescaia e della zona nord della provincia.

L'amministrazione delle Poste si è rivelata rigida sulla sua decisione tra l'altro contrastata all'epoca anche dalle istituzioni pubbliche.

A distanza di qualche anno dobbiamo purtroppo constatare che le nostre previsioni si sono rivelate ottimistiche in quanto, nel frattempo, nella stessa zona si è aperto un centro commerciale importante che ha reso ancora più intenso il traffico non adeguatamente supportato da un miglioramento della viabilità.

Il risultato è che gli anziani non accompagnati, per mancanza di segnaletica pedonale e per carenza di marciapiedi, rischiano per la loro incolumità personale essendo costretti ad attraversare a zig-zag.

La zona peraltro, essendo zona industriale di una certa rilevanza, è caratterizzata da traffico pesante e da parcheggi carenti e mal collocati.

Si riconferma perciò l'esigenza di un intervento anche parziale a garanzia della sicurezza. In questo caso, di persone più fragili e quindi più meritevoli di sostegno e garanzie sociali. E' nostra convinzione che prevenire sia più "utile" che curare per questo motivo, essendo venuti a conoscenza del progetto a cui sta partecipando la studentessa Alessandra Bartolini dell'Università di Pisa, progetto Europeo sulla sicurezza stradale chiamato "ROADS TO RESPECT" e organizzato da ETSC ("EUROPEAN TRASPOT SAFETY COUNCIL") intendiamo sostenerlo poiché, pur non risolvendo definitivamente i problemi è comunque, nell'immediato, un tentativo di rendere più sicuro e corretto l'attraversamento della strada.

Le nostre associazioni che istituzionalmente si occupano del trasporto sociale degli anziani in convenzione con la Società della Salute e del Comune di Grosseto si ritengono abilitate sia alla denuncia delle problematiche sia alla presentazione di proposte utili alla risoluzione dei problemi.

p. AUSER Volontariato Grosseto

Il Presidente

Vera Tamburelli

p. Centro Sociale "I SAGGI"

Il Presidente

Boni Rolando

Questo questionario ha lo scopo di studiare la qualità della sicurezza stradale nella rotatoria ubicata nei pressi dell'Ippodromo del Casalone, all'intersezione tra Via Aurelia Antica, Via Andrea Del Sarto, Viale Caravaggio e Via Alberto Sordi. E' dunque necessario sapere se e quanti "quasi-incidenti" vi si sono verificati.

Per "quasi-incidente" si intende un incidente che stava per avvenire, ma non è avvenuto (ad esempio: "ero distratto ed ho quasi tamponato una macchina, ma ho frenato in tempo).

**Il questionario è rivolto solo alle persone che percorrono o hanno percorso la rotatoria almeno una volta, con qualsiasi mezzo (automobile, moto/scooter, camion, bicicletta) o a piedi.**

<p>1) Ha mai percorso la rotatoria alla guida di un'automobile/moto/camion?  <input type="checkbox"/> SI    <input type="checkbox"/> NO</p>																
<p>2) Se sì, Le è mai capitato di trovarsi in un "quasi-incidente" (cioè una situazione che stava per sfociare in un incidente) a causa di un pedone che attraversava la rotatoria?  <input type="checkbox"/> SI (quante volte _____)    <input type="checkbox"/> NO</p>																
<p>3) Ha mai rischiato di entrare in collisione con un ciclista entrando nella rotatoria o uscendo da essa?  <input type="checkbox"/> SI (quante volte _____)    <input type="checkbox"/> NO</p>																
<p>4) Ha mai attraversato la rotatoria a piedi camminando tra i veicoli, nel tratto dove manca il marciapiede?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%;"><input type="checkbox"/> SI</td> <td style="width: 40%;">tutti i giorni</td> <td style="width: 10%;"><input type="checkbox"/></td> <td style="width: 10%;"><input type="checkbox"/> NO</td> </tr> <tr> <td></td> <td>2-5 volte a settimana</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td></td> <td>1 volta a settimana</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td></td> <td>meno di 1 volta a settimana</td> <td><input type="checkbox"/></td> <td></td> </tr> </table>	<input type="checkbox"/> SI	tutti i giorni	<input type="checkbox"/>	<input type="checkbox"/> NO		2-5 volte a settimana	<input type="checkbox"/>			1 volta a settimana	<input type="checkbox"/>			meno di 1 volta a settimana	<input type="checkbox"/>	
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<p>5) Se sì, le è mai capitato di essere quasi investito da un veicolo che non l'aveva notata?  <input type="checkbox"/> SI (quante volte _____)    <input type="checkbox"/> NO</p>																
<p>6) Ha mai percorso la rotatoria in bicicletta?</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 10%;"><input type="checkbox"/> SI</td> <td style="width: 40%;">tutti i giorni</td> <td style="width: 10%;"><input type="checkbox"/></td> <td style="width: 10%;"><input type="checkbox"/> NO</td> </tr> <tr> <td></td> <td>2-5 volte a settimana</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td></td> <td>1 volta a settimana</td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td></td> <td>meno di 1 volta a settimana</td> <td><input type="checkbox"/></td> <td></td> </tr> </table>	<input type="checkbox"/> SI	tutti i giorni	<input type="checkbox"/>	<input type="checkbox"/> NO		2-5 volte a settimana	<input type="checkbox"/>			1 volta a settimana	<input type="checkbox"/>			meno di 1 volta a settimana	<input type="checkbox"/>	
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<p>7) Se sì, le è mai capitato di essere quasi investito da un veicolo che non l'ha rispettata?  <input type="checkbox"/> SI (quante volte _____)    <input type="checkbox"/> NO</p>																
<p>8) Ritiene che la rotatoria sia pericolosa?  <input type="checkbox"/> SI    <input type="checkbox"/> NO          Se sì, specificare i motivi che la inducono a ritenerla pericolosa</p> <hr/> <hr/> <hr/> <hr/>																



# COMPUTO METRICO

**OGGETTO:** Computo attraversamento Via Alberto Sordi

**COMMITTENTE:**

Data, 30/05/2011

**IL TECNICO**



# COMPUTO METRICO

**OGGETTO:** Computo attraversamento Viale Caravaggio

**COMMITTENTE:**

Data, 30/05/2011

**IL TECNICO**

Num.Ord. TARIFFA	DESIGNAZIONE DEI LAVORI	DIMENSIONI				Quantità	IMPORTI	
		par.ug.	lung.	larg.	H/peso		unitario	TOTALE
	<b>R I P O R T O</b>							
	<b><u>LAVORI A MISURA</u></b>							
1 St.07	Svellimento di cordoli di qualunque larghezza, compreso il taglio della vecchia malta, la pulizia, la cernita, il carico, il trasporto e l'accatastamento dei cordoli riutilizzabil ... di risulta e/o non recuperabile sino a qualsiasi distanza. E' inoltre compreso quanto occorre per dare il lavoro finito. rimozione cordolo aiuola esistente (a sx) rimozione cordolo aiuola esistente (a dx)		3,04 3,38			3,04 3,38		
	SOMMANO ml					6,42	6,05	38,84
2 St.06	Demolizione di aiuole o fondazione stradale o aiuole in materiale stabilizzato o in misto granulometrico o terra, mediante scavo a larga sezione obbligata eseguito con qualsiasi mez ... materiale non riutilizzabile a pubblica discarica fino alla distanza di Km 20. a) Scavi fino alla profondita' di m 1.5 demolizione parte centrale isola direzionale		28,72		0,550	15,80		
	SOMMANO mc					15,80	9,30	146,94
3 07	Trave di contenimento massicciata stradale e di fondazione del cordonato in cls. Rck 200 dimensioni 30 x 30 compreso ogni onere per casseforme e scavo con mezzo meccanico con trasp ... isulta, compresa la ricerca dei sottoservizi, la segnaletica e il pilotaggio del traffico. TRAVE DI FONDAZIONE 30 X 30 realizzazione trave di fondazione 30x30 (più corta) realizzazione trave di fondazione 30x30 (più lunga)		7,53 8,92			7,53 8,92		
	SOMMANO ml					16,45	20,14	331,30
4 St.10	Massicciata stradale stesa con mezzo meccanico e rifinita a mano in pietrisco calcareo 4/7cm compreso copertura con graniglia calcarea stesa con idonee macchine. Compattazione esegu ... , ogni strato sara costipato su tutta la sua larghezza fino a raggiungere il 95% della densità massima AASHO modificata. strato di pietrisco 40-70 per realizzazione attraversamento parte centrale isola direzionale		23,17		0,300	6,95		
	SOMMANO mc					6,95	26,50	184,18
5 07b	Cordolo stradale di contenimento aiuole spartitraffico, isole centrali, ecc. di rotonde in cls. Rck 200 dimensioni 20 x 15/25 compreso ogni onere per casseforme, rifinitura delle ... rne con levigatura manuale del getto, compresa la segnaletica e il pilotaggio del traffico. CORDOLO STRADALE 20 X15/25 cordolo stradale per realizzazione attraversamento parte centrale isola direzionale (più corto) cordolo stradale per realizzazione attraversamento parte centrale isola direzionale (più lungo)		7,53 8,92			7,53 8,92		
	SOMMANO ml					16,45	10,50	172,73
6 C08	Massetto in calcestruzzo vibrato per sottofondo marciapiedi e/o pista ciclabile tipo RcK 200 per mc. Altezza cm.8 massetto in c.l.s. per realizzazione attraversamento parte centrale isola direzionale		25,89			25,89		
	SOMMANO mq					25,89	14,50	375,41
7 ST.37	Tappeto di usura steso con vibrofinitrice o a mano, previa mano d' attacco con emulsione bituminosa al 55% in ragione di 0,80 kg/mq compresa rullatura: in conglomerato bituminoso pezzatura 0/5 per							
	<b>A R I P O R T A R E</b>							1'249,40

COMMITTENTE:





